

PATENT
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CLAIM AMENDMENTS

1. (Currently Amended) An ablation probe, comprising:
an elongated shaft having a distal end;
an ablative element disposed on the distal end of the shaft; and
a lumen longitudinally extending within the shaft; and
a porous structure ~~associated with the distal end~~ extending along a substantial entirety of the shaft in fluid communication with the lumen, the porous structure having a porosity in the range of 20-80 percent.
2. (Original) (Original) The ablation probe of claim 1, wherein the porosity is in the range of 30-70 percent.
3. (Original) The ablation probe of claim 1, wherein the shaft is a rigid shaft.
4. (Original) The ablation probe of claim 1, wherein the porous structure is electrically conductive.
5. (Currently Amended) The ablation probe of claim 1, wherein the porous structure is ~~electrically conductive~~ composed of a metallic substance.
6. (Original) The ablation probe of claim 1, wherein the porous structure has pores with effective diameters in the range of 1-50 microns.
7. (Original) The ablation probe of claim 1, wherein the porous structure has interconnecting pores.
8. (Original) The ablation probe of claim 1, wherein the entirety of the shaft is composed of the porous structure.

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9. (Original) The ablation probe of claim 1, wherein the ablative element comprises at least one electrode.

10. (Original) The ablation probe of claim 1, further comprising a connector assembly mounted to a proximal end of the shaft, wherein the connector assembly comprises a port in fluid communication with the lumen.

11. (Currently Amended) An ablation probe, comprising:
an elongated shaft having a distal end;
an ablative element disposed on the distal end of the shaft; and
a lumen longitudinally extending within the shaft; and
a microporous structure ~~associated with the distal end~~ extending along a substantial entirety
of the shaft in fluid communication with the lumen.

12. (Original) The ablation probe of claim 11, wherein the shaft is a rigid shaft.

13. (Original) The ablation probe of claim 11, wherein the microporous structure is electrically conductive.

14. (Original) The ablation probe of claim 11, wherein the microporous structure has interconnecting pores.

15. (Original) The ablation probe of claim 11, wherein the ablative element is composed of the microporous structure.

16. (Original) The ablation probe of claim 11, wherein the ablative element comprises at least one electrode.

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17. (Currently Amended) The ablation probe of claim 11, wherein the microporous structure is ~~electrically conductive~~ composed of a metallic substance.

18. (Original) The ablation probe of claim 11, further comprising a connector assembly mounted to a proximal end of the shaft, wherein the connector assembly comprises a port in fluid communication with the lumen.

19. (Currently Amended) An ablation probe, comprising:
an elongated shaft having a distal end;
an ablative element disposed on the distal end of the shaft; ~~and~~
a lumen longitudinally extending within the shaft; and
a porous structure ~~associated with the distal end~~ extending along a substantial entirety of the shaft in fluid communication with the lumen, the porous structure having interconnecting pores.

20. (Original) The ablation probe of claim 19, wherein the pores are interconnected in a random arrangement.

21. (Original) The ablation probe of claim 19, wherein the shaft is a rigid shaft.

22. (Original) The ablation probe of claim 19, wherein the porous structure is electrically conductive.

23. (Original) The ablation probe of claim 19, wherein the ablative element is composed of the porous structure.

24. (Original) The ablation probe of claim 19, wherein the ablative element comprises at least one electrode.

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25. (Original) The ablation probe of claim 19, further comprising a connector assembly mounted to a proximal end of the shaft, wherein the connector assembly comprises a port in fluid communication with the lumen.

26. (Currently Amended) A tissue ablation system, comprising:
an ablation probe having an ablative element and a perfusion lumen, ~~at least a portion~~
substantially the entire length of the ablation probe being composed of a porous structure in fluid communication with the perfusion lumen, the porous structure having a porosity in the range of 20-80 percent;

an ablation source operably coupled to the ablative element; and

~~an~~ a fluid source operably coupled to the perfusion lumen.

27. (Original) The tissue ablation system of claim 26, wherein the porosity is in the range of 30-70 percent.

28. (Original) The tissue ablation system of claim 26, wherein the porous structure is electrically conductive.

29. (Original) The tissue ablation system of claim 26, wherein the porous structure has pores with effective diameters in the range of 1-50 microns.

30. (Original) The tissue ablation system of claim 26, wherein the porous structure has interconnecting pores.

31. (Currently Amended) The tissue ablation system of claim 26, wherein the ablation probe is a ~~surgical~~ rigid probe.

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32. (Original) The tissue ablation system of claim 26, wherein the ablative element comprises at least one electrode.

33. (Currently Amended) The tissue ablation system of claim 26, wherein the ablation source is ~~an~~ a radio frequency (RF) ablation source.

34. (Original) The tissue ablation system of claim 26, further comprising a pump assembly for pumping fluid from the fluid source and through the perfusion lumen of the ablation probe.

35. (Currently Amended) A tissue ablation system, comprising:
an ablation probe having an ablative element and a perfusion lumen, ~~at least a portion of the~~
substantially the entire length of the ablation probe being composed of a microporous structure in fluid communication with the perfusion lumen;

an ablation source operably coupled to the ablative element; and

~~an~~ a fluid source operably coupled to the perfusion lumen.

36. (Original) The tissue ablation system of claim 35, wherein the porous structure has interconnecting pores.

37. (Currently Amended) The tissue ablation system of claim 35, wherein the ablation probe is a ~~surgical-rigid~~ rigid probe.

38. (Original) The tissue ablation system of claim 35, wherein the ablative element comprises at least one electrode.

39. (Currently Amended) The tissue ablation system of claim 35, wherein the ablation source is ~~an~~ a radio frequency (RF) ablation source.

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40. (Original) The tissue ablation system of claim 35, further comprising a pump assembly for pumping fluid from the fluid source and through the perfusion lumen of the ablation probe.

41. (Currently Amended) A tissue ablation system, comprising:
an ablation probe having an ablative element and a perfusion lumen, ~~at least a portion of the~~
substantially the entire length of the ablation probe being composed of a porous structure in fluid communication with the perfusion lumen, the porous structure having interconnecting pores;

an ablation source operably coupled to the ablative element; and

~~an~~ a fluid source operably coupled to the perfusion lumen.

42. (Original) The tissue ablation system of claim 41, wherein the pores are interconnecting in a random arrangement.

43. (Currently Amended) The tissue ablation system of claim 41, wherein the ablation probe is a ~~surgical~~ rigid probe.

44. (Original) The tissue ablation system of claim 41, wherein the ablative element comprises at least one electrode.

45. (Currently Amended) The tissue ablation system of claim 41, wherein the ablation source is ~~an~~ a radio frequency (RF) ablation source.

46. (Original) The tissue ablation system of claim 41, further comprising a pump assembly for pumping fluid from the fluid source and through the perfusion lumen of the ablation probe.

47-56. (Cancelled).

57. (New) The ablation probe of claim 11, wherein the entirety of the shaft is composed of the microporous structure.

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58. (New) The ablation probe of claim 19, wherein the entirety of the shaft is composed of the porous structure.

59. (New) The tissue ablation system of claim 26, wherein the ablation probe comprises a shaft, the entirety of which is composed of the porous structure.

60. (New) The tissue ablation system of claim 35, wherein the ablation probe comprises a shaft, the entirety of which is composed of the microporous structure.

61. (New) The tissue ablation system of claim 41, wherein the ablation probe comprises a shaft, the entirety of which is composed of the porous structure.